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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,506	12/20/2004	Maurizio Enrico Tonin	66309-208	8382
68804	7590	06/05/2007		
JOHN P. DE LUCA 17420 RYEFIELD CT. DICKERSON, MD 20842			EXAMINER DELORM, TATIANA M	
			ART UNIT 3744	PAPER NUMBER
			MAIL DATE 06/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,506

Applicant(s)

TONIN, MAURIZIO ENRICO

Examiner

Tatiana Delorm

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/20/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because include legal phraseology "comprising" (line 1). Correction is required. See MPEP 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Appropriate correction is required.

Claim Objections

2. **Claim 1 is objected** to because of the following informalities:

Line 10, "projecting" should be corrected to read "project";

Lines 13-14, "said inlet and said outlet being placed in substantially horizontal plane" should be corrected to read "said inlet and said outlet of the external air flow". This second correction would specify which outlets are being referred to.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. **Claim 3 is rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "at least one intake of said evaporator unit comprise a first vertical intake and a second inclined intake pointing upwards" in lines 3 - 5. This phraseology renders it impossible to ascertain the orientation of the intakes in this claim. It is unclear what is meant by "the intake" and how it relates to the apparatus. In Figure 5a, airflow arrows representing "the intakes" are not vertical and not pointing upwards.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 2 and 6 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Riello (US 4,067,204) in view of Bottaro et al. (WO 01/07837).

In regard to claim 1, Riello teaches an air conditioner (see Figs. 1-5) comprising: a condenser unit (38) crossed by a flow of air external to the room to be conditioned between an inlet (20) and an outlet (22); an evaporator unit (36) crossed by a flow of air internal to the room to be conditioned between an intake (16) and a delivery way (18), wherein said condenser unit (38) and said evaporator unit (36) are arranged

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in a single container (10). In said container, the first part (26) is defined wherein said evaporator unit (36) is arranged, and the second part (28) in which condenser unit (38) is arranged, only said first part of said container (26) in which said evaporator unit (36) is arranged, projecting inside said room to be conditioned (Figs. 1, 2; Abstract, lines 1-3); said parts are aligned one behind the other (Fig. 3) according to an axis parallel to the direction of the inlet (22) and the outlet (20) of said external air flow through, said inlet (22) and said outlet (20) being placed in a substantially horizontal plans-plane (14) and said inlet and outlet consisting of two holes (col. 3, lines 64-65), the perimetral external surface of said second part 28 of said container being suited to be coupled to the surfaces of an opening made in a wall (Fig. 1, 2; col. 2, lines 47-55; col. 6, lines 27-29).

However, Riello does not explicitly teach said evaporator unit 36 with an inclined air delivery opening pointing downwards.

Bottaro et al. teach an evaporator unit 3 with an inclined air delivery opening (43) pointing downwards (Fig. 3; page 1, lines 13-16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Riello with the system taught by Bottaro et al. in order to provide consumers with the most efficient wall-mounted air conditioner that could be positioned at a high distance from the floor, in proximity to the ceiling.

In regard to claim 2, Riello discloses in Figures 1-5 a fore wall (12) with substantially circular holes (16 and 18; col. 1, lines 22-26) having a large diameter

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through which the room air is circulated. However, he does not disclose that the rear wall holes (20 and 22) are circular and having a diameter of 160 mm or greater.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the outside holes as circular with said diameter 160 mm and more, because Applicant has not disclosed that the outside holes with this diameter provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with circular holes of that diameter to ensure adequate room ventilation.

In regard to claim 6, Riello teaches an air conditioner installation comprising: an air conditioner, (10; Figs. 1-5) having: a condenser unit, (38) crossed by a flow of air external to the room to be conditioned between at least an inlet (22) and at least an outlet (20); an evaporator unit (36) crossed by a flow of air internal to the room to be conditioned between at least an intake (16) and at least a delivery way (18), said condenser unit 38 and said evaporator unit (36) being arranged in a single container (10), which defines the first part wherein said evaporator unit (36) is arranged and a second part in which said condenser unit is arranged, said parts being aligned behind each other according to an axis parallel to the direction of the inlet (22) and the outlet (20) of said external air flow, through said at least one inlet and at least one outlet of said condenser unit (38), said inlet (22) and said outlet (20) being placed in a substantially horizontal plane (14, Figs. 3, 4), said inlet and outlet consisting of two holes (20, 22), a wall of said room to be conditioned facing the outside and having an

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opening suited to house air conditioner (Figs. 1, 2), the said part of said container projecting inside said room,

However, Riello does not explicitly teach that the opening of said wall is placed substantially in the top of said wall; the perimetral external surface of said second part of said container being suited to be coupled with the surfaces of an opening made in a wall of said room and delivery openings of said delivery way being inclined downwards.

Bottaro et al. teach the opening of said wall is placed substantially in the top of said wall (Fig. 3); the perimetral external surface of said second part of said container being suited to be coupled (Fig. 3) with the surfaces of an opening made in a wall of said room (Figs. 1-4; page 1, line 2) and delivery openings of said delivery way (43) being inclined downwards (Fig. 3; page 1, lines 13-16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Riello with system taught by Bottaro et al. in order to provide consumers with the most efficient wall-mounted air conditioner that is positioned at a high distance from the floor, in proximity to the ceiling.

7. **Claim 3 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Riello (US 4,067,204) in view of Bottaro et al. (WO 01/07837), and further in view of Nakagawa et al. (US 2003/0167786).

Riello teaches most of the claim limitations, however he does not teach the intake of said evaporator unit (36) comprises a first vertical intake and a second inclined intake pointing upwards.

Nakagawa et al. teach (Figure 1) an intake system of a conventional air conditioner (10), comprising a first vertical intake ("a front air inlet" 10a) and a second inclined intake pointing upwards ("a top air inlet" 10b; col. 1, paragraph [003]).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the system of Riello and Bottaro et al with the front air inlets and the top air inlets provided in the front and top surface of the air conditioner body as taught by Bottaro et al. for the purpose of greatly increasing the air moving efficiency of the apparatus and developing energy energy-efficient technologies for buildings.

8. **Claims 4-5 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Riello (US 4,067,204) in view of Bottaro et al. (WO 01/07837), and further view of Laing (US 3, 279, 209).

Riello and Bottaro et al. teaches most of the claim limitations, however they do not explicitly teach that fan (32) is arranged upstream to said condenser (38); and a fan (30) arranged upstream to said evaporator (36).

Laing teaches a condenser unit comprising a condenser (13) and a fan (20) arranged upstream to said condenser (Fig. 1); and an evaporator unit comprises an evaporator (12) and a fan (19) arranged upstream to said evaporator (Fig. 1).

It would have been obvious to one having ordinary skill in the art at the time of invention was made to modify the system of Riello and Bottaro et al. with the system taught by Laing in order to improve efficiency of the room air conditioning system that is mounted at a high distance from the floor, in proximity to the ceiling.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ikeda et al. (US 6,692,223) teach an air conditioner.
- Woods (US 3, 783, 637) teaches a room air conditioner.
- Kim (US 6, 511, 287) teaches a blowing fan assembly for a window-type air conditioner.
- Matthews et al. (US 4, 102, 148) teach an air conditioning apparatus and method of assembling.
- Jianxing (US 6, 134, 904) teaches a low noise window-type air conditioner.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatiana Delorm whose telephone number is 571-272-3421. The examiner can normally be reached on Monday through Friday from 9:00 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TMD

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz Jules', written over the printed name and title.